

Claims:

1. A remote diagnostics system for POS appliances, wherein said system comprises:

a central control unit including a display and a memory; and

a plurality of POS appliances remote from and serviced by said control unit;

wherein said control unit includes therein:

a plurality of problems which may occur on said appliances;

a plurality of diagnostic queries which may be answered manually by a operator of the control unit or in an automated manner by said control unit;

a plurality of diagnostic rules associated with each of the automated queries, each said rule acting on data obtained from said appliances to provide an answer to its associated query;

a decision tree for each of said problems, each said decision tree relating various of said queries with one another in accordance with the possible answers to said queries; and

a diagnostics engine which, on input of a said problem, executes a series of said queries in a sequence determined by the decision tree for said problem and by the answers to said queries, said diagnostics engine displaying said queries on said display, as well as prompting said operator to answer queries which require a manual input.

2. The system of claim 1, wherein said diagnostics engine displays the answers to said automated queries on the display of the control unit.

3. The system of claim 1, wherein the diagnostics engine requests the operator of the central control to confirm that an automated query should be executed before executing said automated query.

4. The system of claim 1, wherein the diagnostics engine provides the option of answering an automated query manually.

1 5. A method for the remote diagnosis of problems occurring in POS
2 appliances, comprising the steps of:

3 providing a central diagnostic unit remote from said POS appliances;

4 importing definitions into said diagnostics unit of monitored items
5 maintained by said POS appliances;

6 defining a plurality of possible problems which may occur in said POS
7 appliances;

8 defining manual and automated queries which may be used to diagnose
9 said possible problems;

10 associating with each automated query a rule which provides an answer
11 to its associated query by acting on data, relating to one or more of the
12 monitored items, associated with the appliance to be diagnosed;

13 defining a decision tree for each of said problems, each said decision
14 tree relating various of the manual and automated queries with one another in
15 accordance with the possible answers to said queries; and

16 providing a diagnostics engine which, on input of a said problem,
17 executes a series of said manual and automated queries in a sequence
18 determined by the decision tree for said problem and by the answers to said
19 queries, said diagnostics engine displaying said queries on a display of said
20 central diagnostics unit, as well as prompting said operator to answer queries
21 which require a manual input.

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23 6. The method of claim 5, including the step of displaying the answers to
24 the automated queries on the display of the diagnostics unit.

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26 7. The method of claim 5, including the step of requesting confirmation from
27 an operator before executing an automated query.

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29 8. The method of claim 5, including the step of enabling the operator to
30 answer an automated query manually.

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32 9. A system for the remote diagnosis of problems occurring in a plurality of
33 POS appliances by a remote central control unit which is provided with
34 definitions as to data maintained by said POS appliances, wherein said control

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1 unit includes a diagnostics engine therein which displays a plurality of
2 diagnostic queries to the operator of the control unit, the queries being
3 answerable either manually by the operator or automatically by the control unit,
4 and wherein the diagnostics engine displays said queries in an order specified
5 by decision trees that relate the queries to one another based on the possible
6 answers to each query and on the possible problems that might be encountered
7 in the POS appliances, with the results of said queries being displayed both for
8 the manual and automated queries, and with an automated query only being
9 answered on confirmation by the operator to proceed.

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11 10. POS appliance helpdesk computer software for conducting the remote
12 diagnosis of a problem in a POS appliance from a central control unit, the
13 software including:

14 a plurality of problems which may occur in said POS appliance;

15 a plurality of diagnostic queries which may be answered manually by an
16 operator of the control unit or in an automated manner by said control unit;

17 a plurality of diagnostic rules associated with each of the automated
18 queries, each said rule acting on data obtained from said appliance to provide
19 an answer to an associated query;

20 a decision tree for each of said problems, each said decision tree relating
21 various of said queries with one another in accordance with the possible
22 answers to said queries; and

23 a diagnostics engine which, on input of a said problem, executes a series
24 of said queries in a sequence determined by the decision tree of said problem
25 and by the answers to said queries, said diagnostics engine displaying said
26 queries on a display of said central control unit, as well as prompting said
27 operator to answer queries which require a manual input.